Findings & Interpretation: Since adoption of this new algorithm only 3 of 45 patients have experienced side-effects (P=0.04). One patient had severe nausea, one had severe diarrhea and one experienced paresthesias.
Discussion & Implications: The new dosing algorithm has not had a negative impact on stem cell mobilization. Standard doses of plerixafor can cause severe gastro-intestinal disturbance in patients with low body weight. Adjustment for body weight can prevent most of these side-effects.

578

Falls in BMT Patients

Ann Kathrin Jacobson, Brenna O'Brien, ***Cassi Johnson****. 5C Adult Bone Marrow Transplant, University of Minnesota Health, Minneapolis, MN*

Topic Significance & Study Purpose/Background/Rationale: The University of Minnesota Health's Adult Blood and Marrow unit is continually addressing the important issue of inpatient falls. The Adult BMT patients are a very vulnerable high risk population. Nursing interventions serve to decrease costs, prevent lengthening of hospitalization and prevent added injuries and stress to patient and caregivers. In December 2013 the Adult BMT unit moved from a 24- to a remodeled 30-bed unit. Listed are some evidence-based factors that categorize BMT patients as high risk:

Increased age, fatigue, medication related side effects, comorbidities, decreased strength, decreased tone, altered mental status, nutritional status, anemia, oxygen tubing, IV lines and monitoring lines.

Methods, Intervention, & Analysis:

- Nursing involvement with renovation allowed identification of environmental concerns that increased patients' risk.
- Installation of night motion sensor detected lighting.
- New beds that include innovative features for locking desired bed settings and alerting staff to changes in those settings.
- 3 bed alarm sensitivity settings.
- Changes to EPIC charting including highlighted Falls Risk documentation which prompts for interventions.
- Nursing high level shift to shift report that discusses patient risk.
- Weekly electronic medication record interdisciplinary rounds address high risk medications.
- Patient yellow falls wristbands (stocked in bedside supply cart).
- Distinguishable falls precautions door magnets to alert anyone entering room.
- Dedicated patient whiteboard, that color codes activity/falls level.
- Non-skid socks for patient use (stocked in bedside supply cart).
- Post fall huddle form, which prompts immediate analysis.
- Teach back on call light use.

Findings & Interpretation: In 2012 overall fall rate was 4.72. In 2013 overall fall rate was 3.31. Current 2014 fall rate is 2.41 falls per 1000 patient days. Results show decrease in the annual fall rate.

Discussion & Implications:

-Continued goal toward decreasing rate to zero.

-Ongoing fall risk assessment from interdisciplinary team.

-Teaching to staff, patients, and caregivers about risks and prevention.

-Continued evaluation, investigation and adoption of best practices.

579

Ensuring Quality and Standardizing Care for BMT Patients in an Expanding Program

Inna Kaplan*, Theresa Latchford, Trisha Jenkins, Katherine Greene. Nursing, Stanford Healthcare, Stanford, CA*

Topic Significance & Study Purpose/Background/Rationale: Because of higher readmission rate and increase in the number of transplants, BMT inpatient volume at Stanford Hospital has increased significantly. As a result, the patients are overflown to non BMT units daily. Since care of BMT patients is unique and staff on other units lacks specialty training, BMT team members are concerned that overflown patients are not receiving the same level of quality specialized care as the BMT unit provides. Furthermore, patients are dissatisfied with not being on a dedicated unit and not having easy access to nursing staff with specialty training.
Methods, Intervention, & Analysis: The goal of the project is to ensure that we maintain the same standard of quality care for all BMT patients. Since it wasn't feasible to find an additional dedicated space, the focus was on nursing staff training, providing additional support to nursing staff on other units, and monitoring patient safety. Interventions included: (1) develop off-unit nurse float role and staff it 7 days a week on day shift; (2) offer formal BMT classes and informal 1:1 or small group in-services on other units that had BMT patients; (4) in addition to staff training, float nurse attends bedside team rounds and facilitates communication with providers, as well as provides role based and task based nursing support on other units; (5) management monitors and follows up on safety reports.
Findings & Interpretation: Addressing needs of BMT patients roomed on other units is an ongoing challenge. There is limited quantitative data to measure effectiveness of our interventions to date. However, off-unit nurses who attended classes and in-services verbalized increased comfort when caring for BMT patients. Furthermore, anecdotally, off-unit float nurse's support on other units is appreciated by nursing staff, medical providers, and patients. We are planning to maintain off-unit float nurse role on day shift, and are considering expanding it to 24/7 support. To measure effectiveness, we will develop survey for nurses on other units and will continue monitoring safety reports.
Discussion & Implications: Growing pains is probably a common theme in BMT programs with increased inpatient volume. We believe our approach is generalizable and, hopefully, other programs can learn and benefit from our experience.

580

Levofloxacin Prophylaxis for Multiple Myeloma Patients Undergoing Autologous Transplant

Misty Lamprecht*. Professional Practice, The Ohio State University Wexner Medical Center - James Cancer Hospital, Columbus, OH*

Topic Significance & Study Purpose/Background/Rationale: Development of bacteremia in the presence of a central line is a monitored nursing sensitive indicator. It also affects the nurses' ability to care for the BMT patient since the central line is usually removed when this diagnosis is made. A randomized controlled study evaluating the efficacy of short term versus long term cryotherapy during Melphalan administration for the prevention of severe mucositis was recently completed at our institution. One of the data pieces collected during this nursing intervention study was the development of bacteremia. Greater than 20% of the study patients developed bacteremia. Retrospective review showed that prior to cryotherapy implementation the rate was nearly 0%, however, it was noted that Ciprofloxacin prophylaxis was being used during that period.
Methods, Intervention, & Analysis: Study data as well as a literature review were presented during a BMT program quality meeting where multidisciplinary team members, including Epidemiology, were present for discussion. Based on the organisms identified (many Gram negative organisms likely translocated via the damaged GI mucosa), the day of transplant on which they were identified (Day +6 to +10), and the concern for increased incidence of C. difficile, a plan was agreed upon. Levofloxacin is now being administered beginning on Day +4 until Day +9 to patients with Multiple Myeloma who are receiving an autologous BMT with Melphalan as the preparative regimen.
Findings & Interpretation: Analysis of 2 months of data (24 patients) shows the bloodstream infection rate is down to <5% and the rate of C. difficile has not changed. Although this is a small sample of data, more than 6 months of data will be available prior to presentation at the Tandem meeting.
Discussion & Implications: This practice change was implemented in a controlled single population. Based on the impact already noted, our program is considering implementing this same practice change to other populations who also receive Melphalan as part of their preparative regimen. This practice change has positively impacted patients by allowing them to keep their central line throughout their transplant course and eliminating the need for them to be discharged on antibiotic therapy. Continued data monitoring related to this change is occurring.

581

Withdrawn

582

"Let's Get Physical" – Developing an Evidence-Based Exercise Protocol for Blood and Marrow Transplant (BMT) Survivors

Mary Mackrell [1], *Maria Lopez-Bover* [2], *Judith Luck* [3], *Lyle Feinstein* [4], *Yves Pangilinan* [5], *Ana Leyva* [1], *Kristin Levoy* [6]. [1] *BMT Program, Memorial Hospital West, Pembroke Pines, FL;* [2] *Leukemia Lymphoma & BMT Program, Memorial Hospital West, Pembroke Pines, FL;* [3] *Bone Marrow Transplant Program, University of Miami, Miami, FL;* [4] *Memorial Cancer Institute, Pembroke Pines, FL;* [5] *Rehabilitation Services, Memorial Hospital West BMT Program, Pembroke Pines, FL;* [6] *Memorial Hospital West BMT Program, Pembroke Pines, FL*

Topic Significance & Study Purpose/Background/Rationale: Studies demonstrate that strength training and cardiovascular exercise enhance the physical and psychological health of patients undergoing allogeneic BMT (Wiskemann, 2011; Baumann, 2011; Jarden, 2012). Accreditation quality standards (ACOS, 2012; FACT, 2014) require patients to receive pre-transplant evaluation, training and post-transplant follow-up.
Methods, Intervention, & Analysis: With expansion of our BMT program to include allogeneic transplantation, we formulated a focus group, to develop the infrastructure for a BMT-specific physical therapy program. An interdisciplinary team consisting of physical therapists, a physiatrist and BMT clinical team met to explore best practice, define medical eligibility, create educational materials, secure resources, and develop policy and procedure. Dedicated physical therapists implemented the protocols and measured the effectiveness of physical fitness using standardized tools throughout all phases of BMT. A specially equipped room within the BMT Unit is utilized during scheduled clinic visits and inpatient stays. Physical activity regimens include strength training two days per week and endurance training three days per week. All patients receive pre-transplant counseling, exercise sessions during transplant clinic visits, and are re-evaluated 12 weeks post-BMT.
Findings & Interpretation: The exercise program was well received by patients, caregivers and staff. Preliminary findings support the positive impact of exercise. Maps delineating walking distances motivated patients to achieve their goals. BMT nurses recognized and encouraged exercise during the patient's BMT journey.
Discussion & Implications: Clinical programs can efficiently and effectively develop a structured exercise program for patients undergoing allogeneic BMT. Obtaining dedicated resources in these economically challenging times and educating patients, caregivers, and BMT staff remain an important focus of our program. We hope that our model and process will serve as an exemplar to other BMT programs.

583

Fall Innovations: A Multimodal Initiative to Decrease Falls in the Blood and Marrow Transplant Setting

Rodney Moffett [1], *Mary Barnhouse* [2], *Keith Murray* [3], *Ashley Evenson* [4], *Caitlyn Donegan* [5]. [1] *Medical City Dallas Hospital, Dallas, TX;* [2] *Stem Cell Transplant and Research, Medical City Hospital, Dallas, TX;* [3] *Risk Management, Medical City Dallas Hospital, Dallas, TX;* [4] *Stem Cell Transplant and Research, Medical City Dallas Hospital, Dallas, TX;* [5] *Physical Therapy, Medical City Dallas Hospital, Dallas, TX*

Topic Significance & Study Purpose/Background/Rationale: A Stem Cell Transplant unit presents unique challenges for fall initiatives. Relatively healthy patients admitted to a private room, and effectively isolated behind closed doors, are challenged with progressive weakness and fatigue following their preparative regimen. As they become a greater risk for falls, patients also develop pancytopenia, increasing their risk of injury. The purpose of this study was to develop an interprofessional, multimodal protocol to address rising fall rates on the Stem Cell Transplant unit. Literature review revealed the utilization of multiple strategies concurrently resulted in greater improvement in fall rates.
Methods, Intervention, & Analysis: The culture of "patients fall" perception was challenged.

A unit specific fall risk patient teaching tool was developed.

A Staff Safety Pledge was signed by all staff members.

Daily rounding on patients by Charge Nurse and Manager to validate bed alarm usage.